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**United States Patent** [19]

Mueller et al.

[11] **Patent Number:** 5,235,509[45] **Date of Patent:** Aug. 10, 1993[54] **CUSTOMER SELF-ORDERING SYSTEM  
USING INFORMATION DISPLAYED ON A  
SCREEN**[75] **Inventors:** Raymond J. Mueller, Littleton;  
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Inc., Lakewood, Colo.[21] **Appl. No.:** 436,605[22] **Filed:** Nov. 15, 1989**Related U.S. Application Data**[63] Continuation-in-part of Ser. No. 373,381, Jun. 28, 1989,  
abandoned.[51] **Int. Cl.<sup>5</sup>** ..... G06F 15/24; G06F 15/44[52] **U.S. Cl.** ..... 364/405; 364/401;  
395/156; 395/157; 340/706[58] **Field of Search** ..... 364/401, 405, 406, 709.03,  
364/709.04; 340/706; 395/156, 157, 118[56] **References Cited****U.S. PATENT DOCUMENTS**

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*Primary Examiner*—Roy N. Envall, Jr.*Assistant Examiner*—A. Bodendorf*Attorney, Agent, or Firm*—Sheridan, Ross & McIntosh[57] **ABSTRACT**

Method and apparatus are disclosed for facilitating self-ordering of items, particularly in a fast food environment. The apparatus includes a customer terminal having a display screen that is preferably a touch screen used by the customer during the self-ordering operation. The screen displays information that assists the customer in becoming acquainted with the self-ordering process. Subsequent screens display information relating to the selection of food items. Indicia on the display screen represents food items for selection. Such food items are arranged according to food categories. In accordance with one display, indicia representing primary category food items, such as sandwiches, are shown on the screen. One or more of such food items can be selected by the customer using the displayed indicia, such as by touching the screen. This same display includes indicia representing a number of menus for secondary food items, such as salads, desserts and drinks. Touching of indicia representing a particular menu causes another display screen to be shown that illustrates predetermined food items associated with that particular menu. The display screen with the primary category food items also preferably includes further indicia. The selection of such indicia by the customer initiates the occurrence of other predetermined functions, such as cancellation of a previously selected item or an indication that the ordering of food items has been finished. Another screen displays a request as to whether or not the customer wishes to dine in or take out the ordered food items.

**5 Claims, 28 Drawing Sheets**

FRIES/SALAD MENU	DRINK MENU	DESSERT MENU	CANCEL ITEM	HELP	FINISHED ORDERING
TOUCH BOXES TO ORDER ↓					
HAMBURGERS		SANDWICHES		KID'S MEALS	
HAMBURGER 89¢	DOUBLE HAMBURGER \$1.99	CHICKEN SANDWICH \$1.89	KID'S MEAL HAMBURGER \$1.99		
CHEESEBURGER 99¢	DOUBLE CHEESEBURGER \$1.79	TURKEY SANDWICH \$1.89	KID'S MEAL CHEESEBURGER \$1.99		
YOUR ORDER SO FAR					TRY A HOT SANDWICH...